PWGC Strategic Environmental Engineering Solutions

8.0 COMMUNITY AIR MONITORING PLAN

This Community Air Monitoring Plan (CAMP) provides measures for protection for on-site workers and the downwind community (i.e., off-site receptors including residences, businesses, and on-site workers not directly involved in excavation work) from potential airborne contaminant releases resulting from excavation activities. Action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that the work did not spread contamination off-site through the air.

The primary air monitoring concerns for this site are VOCs and dust particulates.

8.1 Regulatory Requirements

This CAMP was established in accordance with the following requirements:

- 29 CFR 1910.120(h): This regulation specifies that air shall be monitored to identify and quantify levels
 of airborne hazardous substances and health hazards, and to determine the appropriate level of
 protection for workers.
- New York State Department of Health's (NYSDOH) Generic Community Air Monitoring Plan: This guidance specifies that a community air-monitoring program shall be implemented to protect the surrounding community and to confirm that the work does not spread contamination off-site through the air.
- NYSDEC Technical and Guidance Memorandum (TAGM) #4031 Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites: This guidance provides a basis for developing and implementing a fugitive dust suppression and particulate monitoring program as an element of a hazardous waste site's health and safety program.

8.2 Air Monitoring

The following sections contain information describing the types, frequency and location of real-time monitoring.

8.2.1 Real-Time Monitoring

This section addresses the real-time monitoring conducted within the work area, and along the work perimeter, during intrusive activities.

8.2.1.1 Work Area

The following instruments shall be used for work area monitoring:

- ♦ PID
- Dust Monitor



Table 2-1 presents a breakdown of each main activity and provides the instrumentation, frequency and location of the real-time monitoring for the site. Table 2-2 lists the Real-Time Air Monitoring Action Levels to be used in work areas.

8.2.1.1 Community Air Monitoring Requirements

To establish ambient air background concentrations, air quality monitoring shall be performed at several locations around the perimeter of the excavation before activities begin. Air monitoring shall be continued periodically in series during work activities.

Fugitive respirable dust will be monitored using a MiniRam Model PDM-3 aerosol monitor or equivalent. Air will be monitored for VOCs with a portable Photovac MicroTip PID, or equivalent. Table 2-1 presents a breakdown of each main activity and provides the instrumentation, frequency and location of the real-time monitoring for the site. Table 2-2 lists the Real-Time Air Monitoring Action Levels to be used in work areas. Air monitoring data shall be documented in a site log book by the designated site safety officer. The site safety officer or delegate shall calibrate and maintain air monitoring instruments in accordance with manufacturer's specifications. Instruments shall be zeroed daily and checked for accuracy and a daily log shall be kept. If additional air monitoring is required, protocols shall be appended to this plan.

TABLE 2-1
FREQUENCY AND LOCATION OF AIR MONITORING

ACTIVITY	AIR MONITORING INSTRUMENT	FREQUENCY AND LOCATION
Excavation	PID, Dust Monitor	Continuous in Breathing Zone (BZ) and downwind work area perimeter during intrusive activities or if odors become apparent. Screening upon arrival at excavation locations, screening in the BZ during excavation and downwind work area perimeter every 30 minutes during non-intrusive activities



TABLE 2-2
REAL_TIME AIR MONITORING ACTION LEVELS

AIR MONITORING INSTRUMENT	MONITORING LOCATION	ACTION LEVEL	SITE ACTION	REASON
PID	Breathing Zone	0-25 ppm, non-transient	None	Exposure below established exposure limits
PID	Breathing Zone	25-100 ppm, non-transient	Don Air-Purifying Respirator (APR)	Based on potential exposure to VOCs
PID	Breathing Zone	>100 ppm, non-transient	Don Air-Supplied Respirator (ASR) or Self- Contained Breathing Apparatus (SCBA), Institute vapor/odor suppression measures, Notify Health & Safety Manager (HSM).	Increased exposure to site contaminants, potential for vapor release to public areas.
PID	Work Area Perimeter	< 5 ppm	None	Exposure below established exposure limits.
PID	Work Area Perimeter	> 5 ppm	Stop work and implement vapor release response plan until readings return to acceptable levels, Notify HSM.	Increased exposure to site contaminants, potential for vapor release to public areas
Aerosol Monitor	Work Area Perimeter	>100 but < 150 µg/m³ for 15 minutes	Institute dust suppression measures, Notify HSM.	Work to continue if particulate concentrations remain below 150 µg/m³
Aerosol Monitor	Work Area Perimeter	>150 µg/m³	Don ASR or SCBA, Institute dust suppression measures, Notify HSM.	Stop work until readings return to acceptable levels,

8.3 Vapor Emission Response Plan

This section is excerpted from the NYSDOH guidance for Community Air Monitoring Plan - Ground Intrusive Activities.

If the ambient air concentration of organic vapors exceeds 5 ppm above background at the perimeter of the work area, activities shall be halted and monitoring continued. Vapor suppression measures can also be taken at this time. If the organic vapor level decreases below 5 ppm above background, work activities can resume. If organic vapor levels are greater than 5 ppm over background but less than 25 ppm over background at the perimeter of the work area, activities can resume provided:

 Organic vapor levels 200 feet downwind of the work area or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background.

PWGC Strategic Environmental Engineering Solutions

If organic vapor levels exceed 25 ppm at the perimeter of the work area, work activities shall be halted. When work is halted, downwind air monitoring as directed by the Site Health & Safety Officer (SHSO) shall be implemented to determine whether vapor emission may impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission Response Plan Section.

8.4 Major Vapor Emission Response Plan

If organic vapor levels greater than 5 ppm over background are identified 200 feet downwind from the work area or half the distance to the nearest residential or commercial property, whichever is less, work activities shall be

halted.

If, following the cessation of the work activities, or as the result of an emergency, organic vapor levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the work area, then the air quality shall be monitored within 20 feet of the perimeter of

the nearest residential or commercial structure (20 Foot Zone).

If efforts to abate the emission source (see Section 5.0) are unsuccessful and if organic vapor levels are approaching 5 ppm above background for more than 30 minutes in the 20 Foot Zone, then the Major Vapor

Emission Response Plan shall automatically be placed into effect.

However, the Major Vapor Emission Response Plan shall be immediately placed in effect if organic vapor levels are greater than 10 ppm above background.

are greater than to ppin above backgreaman

Upon activation, the following activities shall be undertaken:

1. Emergency Response Contacts, as identified in the Health & Safety Plan, shall go into effect.

2. The local police authorities shall be contacted immediately by the Health & Safety Officer (HSO) and

advised of the situation.

3. Frequent air monitoring shall be conducted at 30-minute intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the

HSO.

8.5 Data Quality Assurance

8.5.1 Calibration

Instrument calibration shall be documented in the designated field logbook. Instruments shall be calibrated before each shift. Calibration checks may be used during the day to confirm instrument accuracy. Duplicate

readings may be taken to confirm individual instrument response.

8.5.2 Operations

Instruments shall be operated in accordance with the manufacturer's specifications. Manufacturers' literature, including an operations manual for each piece of monitoring equipment shall be maintained on-site by the Field Operations Leader (FOL)/HSO for reference.

P.W. Grosser Consulting, Inc. • P.W. Grosser Consulting Engineer & Hydrogeologist, PC 630 Johnson Avenue, Suite 7 • Bohemia, NY 11716 PH 631.589.6353 • FX 631.589.8705 • www.pwgrosser.com New York, NY • Syracuse, NY • Seattle, WA 35



8.5.3 Data Review

The Field Team Leader FOL/HSO shall interpret monitoring data based on Table 2-2 and his/her professional judgment. The FOL/HSO shall review the data with the HSM to evaluate the potential for worker exposure, upgrades/downgrades in level of protection, comparison to direct reading instrumentation and changes in the integrated monitoring strategy.

Monitoring and sampling data, along with sample documentation shall be periodically reviewed by the HSM.

8.6 Records and Reporting

Readings shall be recorded and available for review by personnel from NYSDEC and NYSDOH. Should any of the action levels be exceeded, the NYSDEC Division of Air Resources shall be notified in writing within five (5) working days.

The notification shall include a description of the control measures implemented to prevent further exceedances.



FIGURES



